

MEMORANDUM

SUBJECT: Western berm cap inspection of armor cap at the San Jacinto River River Waste Pits superfund site.

FROM: Valmichael Leos, On-Scene Coordinator
Emergency Readiness Team (6SF-PE)

TO: File

I. PURPOSE

This memorandum is to document observations from a site inspection conducted on July 24, 2012. The inspection was prompted by a notification letter sent to the EPA on July 23, 2012 via email by the respondents regarding erosion that had occurred at several spots of the western berm of the armor cap.

II. BACKGROUND

In accordance with the operations, monitoring, and maintenance (OMM) plan for the San Jacinto River Waste Pits superfund site, the respondents are required to conduct quarterly cap inspections starting January 2012 for the first two years, semi-annually from years three to five, and annually after year five. In addition to the regularly scheduled cap inspections, additional inspections may be needed if a major storm event occurs at or near the site that could adversely affect the site.

The next quarterly cap inspection will be scheduled in July of 2012. The results of the first two site inspections conducted in February and May 2012 were as follows:-

- Site security fencing visible, in tact
- Site signage was visible, in tact
- No evidence of trespassers (no one seen fishing at or surrounding waste pits)
- Cap observed to be in visually intact (no areas of cap erosion noted)
- Review of 1st and 2nd quarterly topographic surveys, no problematic areas needing cap repair determined
- EPA request for removal of silt fencing along the TxDOT ROW that is not being utilized
- EPA request for removal of fallen debris along the TxDOT ROW near I-10 (safety concern)

The notification letter sent to EPA by the respondents on July 23, 2012 references a "reduction in the stone cover thickness" along the western edge. Upon completion of the EPA site inspection the following key points were noted:-

- No visible waste was observed to have been released above the water
- Several areas along the western berm have experienced bulging which is causing unnecessary stretching of the geotextile fabric and LLDP liner underneath
- Geotextile fabric and geomembrane LLDPE that is exposed are observed to be in tact without any tearing or holes
- The western armor cap berm is still intact, but has experienced significant erosion due to causes unknown
- The RPs expect to have a repair plan submitted to EPA by Friday July 27, 2012 for review and approval.
- The repair will involve a larger gradation of rock and is estimated to be completed in 2 to 3 business days from date of plan approval.

III. CONCLUSIONS

Although no visible waste was observed to have been released above land, I believe further investigation is warranted surrounding the areas underwater immediately adjacent to the western berm to ensure cap integrity. Similar concerns have also been raised about the current structural stability of the western berm.

It has also been observed that the western berm has experienced bulging. This bulging may have occurred during the construction phase of the cap placement from heavy equipment that may have inadvertently changed the geometrical shape. The armor cap erosion along the western berm has exposed the geotextile fabric that provides the protective layer from the waste underneath.

The fabric exposure along with areas of the western berm that have experienced bulging has raised concerns about the cap's structural and environmental effectiveness. During the inspection it was observed that none of the areas of exposed geotextile fabric has any tears, but concerns remain about effectiveness due to the fabric stretching caused by the underlying waste bulging underneath.

Review of the cap repair plan submitted has noted that you are considering a more dense armor cap material C instead of B/C to repair the western berm. This design / construction change requested has raised concerns about the overall effectiveness of the cap design and quality of construction. In response to this concern, EPA will be conducting a third party review of the overall cap design and construction. Moreover, EPA is requesting the respondents conduct a reassessment of the overall cap design and construction and submit a detailed report about the western cap failure.